



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,618	05/01/2006	Cyrille Durand	3712036-915	3622
29157 K&L Gates LLP P.O. Box 1135 CHICAGO, IL 60690	7590 07/15/2010			
EXAMINER				
NELSON, MICHAEL B				
ART UNIT		PAPER NUMBER		
1783				
NOTIFICATION DATE		DELIVERY MODE		
07/15/2010		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

chicago.patents@klgates.com

### Office Action Summary

**Application No.**

10/595,618

**Applicant(s)**

DURAND ET AL.

**Examiner**

MICHAEL B. NELSON

**Art Unit**

1783

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 June 2010.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3 and 5-24 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1, 3, 5-24 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SI/22)  
4) ☐ Interview Summary (PTO-413)  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_  
Paper No(s)/Mail Date \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendment of 06/21/10 has been entered. Claims 1, 3, 5-24 are currently under examination on the merits. The previous 112 rejection is withdrawn. The examiner acknowledges that the means for closing can also include caps and sealed membranes in addition to the screw cap mentioned in the previous office action.

### ***35 USC § 112 6<sup>th</sup> paragraph***

2. Applicant has used "means for" language in claim 6, (closing means for closing off). This language meets the three prong requirement for 6th paragraph language. MPEP 2181(I). The examiner will consider the "means for closing off" language to be read upon by the "caps or sealed membranes" disclosed in the instant specification at paragraph 18.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1, 3, 5-11, 13-19 and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hideaki et al. (JP 2001-122237), see translation, in view of Beck et al. (U.S. 5614148) in view of Hutchinson et al. (U.S. 2003/0031814).

7. Regarding claims 1, 6, 15-17 and 23 and 24, Hideaki et al. discloses a bottle for packaging a liquid beverage product (Fig. 1 and [0001]). The bottle is formed by stretch blow molding [0008] and given that the general inventive concept is for reduced thickness walls as a result of the stretching, the stretch would take place at higher than normal stretch ratios. The bottle has a neck, which functions as a closing means and a distribution means, side walls and a bottom (Fig. 1). The bottle is disclosed as having ribs at intervals along the wall to provide deformation strength ([0006]) and in general the filled bottle would be substantially incompressible by hand. The diameter of the neck is smaller than the diameter of the wall portions (Fig. 1). Also the container is made of PET ([0002]).

Hideaki et al. does not explicitly disclose the presence of feet in the bottle. Beck et al. discloses a bottle bottom configuration with five separate feet (Fig. 5), which facilitates improved stability when the bottle is placed vertically onto a flat surface (See Abstract). The

inventions of both Hideaki et al. and Beck et al. are drawn to the field of blow molded PET bottles and therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the unspecified bottom of the bottle of Hideaki et al. by using the bottom configuration as taught by Beck et al. with its multiple legs for the purposes of imparting improved stability when the bottle is placed vertically onto a flat surface.

Regarding the thickness limitations, Hideaki et al. discloses that the walls, 3, to the bottom, 4, have a thickness of between 20 and 50 micrometers while the un-stretched neck portion has a thickness of between 200 and 500 micrometers ([0007]-[0010]). Hideaki et al. does not disclose a thickened bottom portion as instantly claimed. Beck et al. shows that a structurally resilient bottom portion structure. The thickness of the wall portions, D1, and the tip of the feet, B, are relatively thin compared to the thickness in between the feet portions, A, (Fig. 3). The added thickness in the bottom portion provides extra stability to the bottle for when the bottle is set down on a table or dropped on the floor (i.e. one having ordinary skill in the art would find it obvious that the bottom of a bottle benefits from added structural support). Hideaki discloses that the bottle of his invention has two wall thicknesses: a structurally stable wall thickness of 0.2-0.3 mm (i.e. for the shoulders of the bottle as seen in Fig. 1 and 2) and a ultra thin thickness of 0.02-0.05 (See Claim 1). Hence to create the structurally stable bottom portion for the bottle of Hideaki (as would be obvious to one having ordinary skill as explained above) the wall thickness of 0.2-0.3 mm would be used in the thicker bottom portions (i.e. in between the feet) and the wall thickness of 0.02 to 0.05 would be used for the thinner portions (i.e. the feet and the container walls). Moreover, while Beck et al. shows the general structure of the bottom of a container, the exact thicknesses of the various portions of the container would

have been adjusted by one having ordinary skill in the art to provide both adequate structural support and still reduce the cost to manufacture as much as possible.

Regarding the volume per gram of PET of the bottle of modified Hideaki et al, while modified Hideaki et al. does not explicitly mention that the volume/gram is within the claimed range, given the disclosure towards using less resin to achieve equivalent volume containment ([0003]), and given the substantially similar wall thickness, one having ordinary skill in the art would optimize the volume of the container in relation to the amount of PET used in the container by altering the shape and wall thickness of the container in order to reduce production costs of the container.

Regarding the weight ratio of the weight of the wall section compared to the weight of the bottom section, while modified Hideaki et al. does not explicitly state that his bottle has a ratio which falls within the claimed range, one having ordinary skill in the art would have optimized the weight of the wall portion of the container to the bottom portion of the container as part of the general design process for determining the shape and wall thickness of various parts of the container, (as explained above).

While modified Hideaki does not explicitly disclose the semi-crystalline nature of the PET used in their bottles, one having ordinary skill in the art of blow molded PET bottles would realize that semi-crystalline PET is conventionally used for blow molding operations due to its advantageous rheological properties (See for example Hutchinson et al., [0007]).

The bottle of modified Hideaki has a greater section in that there is a maximum diameter of the bottle along its walls.

The bottle of Hideaki also has a screw cap (Fig. 1) which reads on the instant means for closing (instant specification page 11).

Additionally, with respect to claims 3, 11 and 19, Hideaki et al. discloses that the walls, 3, to the bottom, 4, have a thickness of between 20 and 50 micrometers while the un-stretched neck portion has a thickness of between 200 and 500 micrometers ([0007]-[0010]). With respect to claim 5, Beck et al. discloses that each foot part has an increased thickness part (Fig. 3, A, and Table 1). With respect to claim 7, Blow molded bottles of the type in Hideaki et al. and Beck et al. are designed to hold beverages (i.e. liquid). With respect to claim 8 and 9, when filled with such a liquid and closed, the bottle of modified Hideaki et al. would be designed under the conventional requirement of beverage containing blow molded bottles to be substantially highly resistant to the loads typically associated with handling and shipping (i.e. incompressible), including those recited in instant claim 9. With respect to claims 10 and 18, the body of the bottle has a substantially cylindrical shape (Fig. 1). Numerous external aesthetic adornments, including pad printing of images or indicia, would be obvious to one having ordinary skill as providing increased commercial appeal.

With respect to claims 13 and 21, regarding the ratio of the diameter of the body to the neck (including the maximum diameter of the body, i.e.  $d_1$  to  $d_2$ ), one having ordinary skill in the art would have adjusted, through routine experimentation, the ratio of the neck opening to body diameter in order to control the aesthetic appeal of the finished bottle and in order to optimize the speed at which the bottle could empty its liquid contents and the total time required for the bottle to empty its contents.

With respect to claims 14 and 22, regarding the ratio of the height of the neck and the height of the body, one having ordinary skill in the art would have adjusted, through routine experimentation, the height ratio of the neck to the body in order to control the aesthetic appeal of the finish bottle and in order to optimize the total volume of the container in relation to the strength of the closure mechanism of the bottle (i.e. the higher the neck length the more area there is for engagement between the twist top type closure commonly associated with blow molded PET bottles and the bottle itself).

8. Claims 12 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hideaki et al. (JP 2001-122237), see translation, in view of Beck et al. (U.S. 5614148) in view of Hutchinson et al. (U.S. 2003/0031814), as applied to claims 4 and 6 above, and further in view of Schaupp et al. (U.S. 2002/0185212).

Regarding claims 12 and 20, modified Hideaki discloses all of the limitations as set forth above. Modified Hideaki does not explicitly disclose that the bottles be adorned with printed images. Schaupp et al. discloses an apparatus which allows for the pad printing ([0014]) of bottles (See Abstract) which one having ordinary skill in the art would appreciate to be advantageous because the printed image results in improved aesthetic appeal to the consumer. Hence it would have been obvious to have pad printed images onto the bottle of modified Hideaki as taught by Schaupp et al.

#### ***Response to Arguments***

9. Applicant's arguments of 06/21/10 have been considered but are not persuasive.

10. Applicant argues that it would not have been obvious to have arrived at the instant wall to bottom weight ratio. The examiner disagrees. As part of the routine procedure of adjusting the

scale and shape of the bottles, along with the inventive thicknesses taught by the references, one having ordinary skill would arrive at many different shapes having many different wall thicknesses, wall heights and bottle body diameters and as such would arrive at many different wall to bottom weight ratios, including those as instantly claimed. Particularly, keeping the same basic configuration as taught in the references and making the bottle taller or shorter to accommodate different volumes of liquid would greatly change the ratio. The examiner also notes that there is nothing on the record to indicate where the “bottom” of the bottle ends and the “walls” begin or end.

11. Regarding applicants arguments against the volume per gram of PET, along the same reasoning set forth above, adjusting the shape and scale of the bottle would adjust the volume per gram of PET. For example making the bottle more spherical would increase its volume capacity per gram of PET whereas making the bottle cylindrical, especially a very narrow cylinder with the same wall thicknesses, would decrease the volume to PET ratio. Also, considering that the walls are much thinner than the neck and the bottom, adjusting the height of the bottles of the prior art would change the volume to PET ratio. As above, in the process of adjusting the shape and size of the container, the bottles ratio would be adjusted to fall within the instant ranges. Applicant argues that Beck uses a specific example of a 2 liter bottle, however, this example is not limiting.

12. Finally, applicant argues that Beck teaches away from using its foot configuration with the wall thicknesses of Hideaki. This is not the case. Applicant repeatedly cites to a portion that teaches that reducing the weight in the bottom of a bottle is insufficient. This actually teaches for the combination of the two references because all the bottom of Hideaki possess in terms of

structure is a reduced weight. Therefore it would have been obvious to have used the configuration of Beck, with its specifically positioned thick and thin portions to allow for the reduced thickness to be implemented without unduly sacrificing structural integrity. Specifically applicant argues: "Beck specifically acknowledges that simply decreasing the weight of the bottom portion of the bottle," (i.e. as was taught by Hideaki) "without also redesigning the bottle," (i.e. according to the structural design of Beck) "is an inadequate method for achieving a reduced-weight bottle with sufficient" (Remarks, Page 5). Hence the cited portion of Beck discloses that his structural design should be used with techniques that aim at reducing bottle weight by reducing thicknesses (i.e. Hideaki).

13. In short, Hideaki discloses a method for making a bottle with ultrathin wall portions and structurally stable thick portions (Fig. 1 and 2). Hideaki is silent as to the particular structure of the bottom but says that it should preferably have a thicker wall thickness. Beck discloses a bottom structure that has feet with a thickness equal to the wall thickness of the bottle, (Fig. 3, W and B) and a thicker portion in between the feet (Fig. 3, A) which gives structural stability. It would have been obvious to have used the foot structure of Beck, with the thin and thick (i.e. stable) wall thickness of Hideaki, to allow for a bottled with reduced overall PET weight, while still having sufficient structural stability in the foot area.

14. Applicant references Hutchinson however that reference was just used to show it was known to use semi-crystalline PET as a material in blown PET bottles and does not relate the structural layout of the bottle.

15. Applicant is also respectfully reminded that if they decide to file another appeal brief the means plus language in claim 6 must be addressed or the brief will be considered defective. The

appeal brief must: "(1) identify, for each independent claim involved in the appeal and for each dependent claim argued separately, every means plus function and step plus function under 35. U.S.C. 112, sixth paragraph...". 37 CFR 41.37(c)(1)(v).

***Conclusion***

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL B. NELSON whose telephone number is (571) 270-3877. The examiner can normally be reached on Monday through Thursday 6AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Patricia L. Nordmeyer/  
Primary Examiner, Art Unit 1783

/MN/  
07/08/10